Senator Ted W. Lieu
28th Senate District

SR 59 - Air Quality: Leaded Aviation Fuel

Purpose:

This resolution supports the Federal Aviation Administration's (FAA) initiative to certify safe unleaded aviation fuel for piston engine aircraft. Additionally, it would encourage the FAA and the United States Environmental Protection Agency (EPA) to prioritize the development and certification of unleaded aviation fuel in advance of 2018.

Background:

Aviation gasoline, or "avgas" as it is commonly known, is utilized in general aviation aircraft that are powered by internal combustion reciprocating piston engines. Avgas is a leaded fuel, and its combustion results in toxic air emissions of lead. According to the United States EPA, avgas is the greatest source of airborne lead emissions in the United States – nearly 500 tons annually.

Lead that is emitted into the air can be inhaled, or after it settles, ingested. Ingestion of lead that has settled onto surfaces like dirt is the main way children are exposed to lead originally released in the air. Lead does not break down over time, meaning it can exist for years in soil or other surfaces. Public health officials have concluded that there is no safe level of exposure to lead. Once lead is in the body, whether via inhalation or ingestion, it is rapidly absorbed into the bloodstream and results in a broad range of health effects.

The health effects of lead exposure are grim: in adults it is linked to cardiovascular effects such as high blood pressure and heart disease, and in children the effects are neurological, such as irreversible brain damage and reduction of a person's cognitive function. Also, lead exposure has been linked to reductions in a child's IQ level, learning, memory, and behavior. This loss in IQ and learning ability can be, in a child on the high end of the IQ spectrum, sufficient to disqualify her from a gifted education program, and on the lower end, sufficient to push her into special education. In addition, a study of health effects of pollution on children in China, published on June 30, 2014, has found that even low blood levels of lead in children are linked to emotional problems like anxiety and depression.

Approximately 16 million people live within a half-mile of airports that use leaded avgas. Children living within 500 meters of an airport where planes use leaded avgas have higher blood lead levels than other children. Most families living near these airports are low-income, often minority, households that already face a variety of health concerns including lead paint exposure.

In an effort to minimize its negative health effects, lead has been successfully removed from many consumer goods, including household paint and toys. California successfully phased lead out of automobile gas in 1992, and the EPA adopted a similar program that did so nationwide in 1996. However, lead in avgas remains a public health threat. The lead content of avgas is regulated at a federal level, by the FAA.

The FAA together with the EPA has developed a goal to identify a viable unleaded avgas by 2018. Ultimately achieving this goal would eliminate lead emissions from piston engine aircraft.

This resolution:

While the FAA's and EPA's goal is a step in the right direction, it is of utmost importance to speed up the process of finding unleaded avgas alternatives. Every day, children face exposure to lead due to avgas – especially children living in close proximity to airports where leaded avgas is combusted. In order to mitigate these effects as soon as possible, timely action must be taken.

Status: Senate Floor

Support: Concerned Residents Against Airport Pollution (CRAAP)

Oppose: None received.

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